WHAT IS CLAIMED IS:

1. An image decoding apparatus in which, for nonnegative integers i and j, data of an i-th key frame and a j-th key frame are defined as KF_i and KF_j, respectively, a correspondence data file between the i-th key frame and the j-th key frame is defined as $C_{i,j}$, and data of an intermediate frame between the i-th key frame and the j-th key frame is defined as $IF_{i,j}$, the apparatus comprising:

an error detector which receives a data stream that includes KF_i, KF_{i+1} and $C_{i,i+1}$, and detects whether or nor there is an error in the data stream;

an intermediate image generator which generates $IF_{i,i+1}$ from the data stream; and

an error controller which, when an error occurs in the data stream, controls said intermediate image generator in a manner such that an error avoidance processing is performed in said intermediate image generator.

2. An image decoding apparatus according to Claim 1, wherein, when the error occurs in KF_{i+1}, the error avoidance processing is performed by substituting data of another key frame for KF_{i+1}.

3. An image decoding apparatus according to Claim 2, wherein, the error avoidance processing is performed by substituting either KF_i or KF_{i+2} for KF_{i+1}.

4. An image decoding apparatus according to Claim 1, wherein, when the error occurs in KF_{i+1}, the error avoidance processing is performed in a manner such that $IF_{i,i+1}$ is generated based on data of another key frame and a correspondence data file relating thereto.

5. An image decoding apparatus according to Claim 4, wherein, the error avoidance processing is performed in a manner such that $IF_{i,i+1}$ is generated by deforming KF_i based on KF_i and $C_{i,i+1}$, without using KF_{i+1}.

6. An image decoding apparatus according to Claim 1, wherein, when the error occurs in KF_{i+1} and KF_{i+2}, the error avoidance processing is performed in a manner such that $IF_{i,i+1}$ is generated based on data of at least one key frame other than KF_{i+1} and KF_{i+2}, and at least two correspondence data files relating thereto.

7. An image decoding apparatus according to Claim 6, wherein, the error avoidance processing is performed in a manner such

that $IF_{i,i+2}$ is generated by deforming KF_i based on $C_{i,i+1}$ and $C_{i+1,i+2}$, without using KF_{i+1} and KF_{i+2}.

8. An image decoding apparatus according to Claim 1, wherein, when the error occurs in KF_{i+1}, the error avoidance processing is performed in a manner such that a correspondence data file $C_{a,b}$, $a \leqq i+1$ and $i+2 < b$, included in the data stream is detected, $IF_{a,b}$ is generated by utilizing $C_{a,b}$, KF_a and KF_b and then part of the generated $IF_{a,b}$ is substituted for $IF_{i+1,i+2}$.

9. An image decoding apparatus according to Claim 1, wherein, when the error occurs in KF_{i+1}, the error avoidance processing is performed in a manner such that a correspondence data file $C_{a,b}$, $a < i+1$ and $i+2 \leqq b$, included in the data stream is detected, $IF_{a,b}$ is generated by utilizing $C_{a,b}$, KF_a and KF_b and then at least a part of the generated $IF_{a,b}$ is substituted for $IF_{i+1,i+2}$.

10. An image decoding apparatus according to Claim 1, wherein, when the error occurs in KF_{i+1}, the avoidance processing is performed in a manner such that a correspondence data file $C_{a,b}$, $a \ll i+1$ and $i+2 \ll b$, included in the data stream is detected, $IF_{a,b}$ is generated by utilizing $C_{a,b}$, KF_a and KF_b and then part of the generated $IF_{a,b}$ is substituted for $IF_{i+1,i+2}$.

11. An image decoding apparatus according to Claim 1, wherein, when the error occurs in $C_{i+1,i+2}$, the error avoidance processing is performed in a manner such that another correspondence data file is substituted for $C_{i+1,i+2}$.

12. An image decoding apparatus according to Claim 11, wherein the error avoidance processing is performed in a manner such that either $C_{i,i+1}$ or $C_{i+2,i+3}$ is substituted for $C_{i+1,i+2}$.

13. An image decoding apparatus according to Claim 1, wherein, when the error occurs in $C_{i+1,i+2}$, the error avoidance processing is performed in a manner such that a new correspondence data file generated based on at least two other correspondence data files is substituted for $C_{i+1,i+2}$.

14. An image decoding apparatus according to Claim 13, wherein, the error avoidance processing is performed in a manner such that a new correspondence data file generated based on both $C_{i,i+1}$ and $C_{i+2,i+3}$ is substituted for $C_{i+1,i+2}$.

15. An image decoding apparatus according to Claim 1, wherein, when the error occurs in $C_{i+1,i+2}$, the error avoidance processing is performed in a manner such that $C_{i+1,i+2}$ is

adjusted to specify an identity mapping.

16. An image decoding apparatus according to Claim 1, wherein, said error controller abandons the error avoidance processing in the event that it is judged that seriousness of the error is below a predetermined level.

17. An image decoding apparatus according to Claim 1, wherein the correspondence data file $C_{i,j}$ is generated based on a pixel-based matching computation between KF_i and KF_j and said intermediate image generator generates an intermediate frame $IF_{i,j}$ by interpolation based on KF_i, KF_j and $C_{i,j}$.

18. An image coding apparatus in which, for nonnegative integers i and j, data of an i-th key frame and a j-th key frame are defined as KF_i and KF_j, respectively, and a correspondence data file between the i-th key frame and the j-th key frame is defined as $C_{i,j}$, the apparatus comprising:

an image input unit which receives data for key frames;

a correspondence data generator which generates $C_{i,i+1}$ by utilizing KF_i and KF_{i+1}, and generates $C_{i,j}$ by utilizing KF_i and KF_j, $j > i+1$, among the input key frame data; and

a stream generator which generates a data stream including data generated by said correspondence data

generator.

19. An image coding apparatus according to Claim 18, wherein said correspondence data generator generates $C_{i,j}$ in a manner such that intensity of $C_{i,j}$ is lower than that of the $C_{i,i+1}$.

20. An image coding apparatus according to Claim 18, wherein said correspondence data generator generates $C_{i,i+1}$ and $C_{i,j}$ in a manner such that data used for checking for errors are embedded in the $C_{i,i+1}$ and $C_{i,j}$.

21. An image coding apparatus according to Claim 18, wherein said correspondence data generator generates correspondence data files by computing a matching between critical points detected through a two-dimensional search respectively conducted on two key frames.

22. An image coding apparatus according to Claim 18, wherein a portion of a frame is divided into a plurality of block regions to each of which a parity bit is added, and error is detected in only said portion which is considered to be of high importance.

23. An image coding apparatus according to Claim 18, wherein a

portion of $C_{i,j}$ is divided into a plurality of data blocks and each of the data blocks is provided with a parity bit.

24. An image decoding method, comprising:

acquiring a data stream that includes a plurality of key frames and a correspondence data file therebetween;

generating an intermediate frame between the key frames, from the data stream; and

monitoring for an error in the data stream,

wherein, when an error is detected, an error avoidance processing is performed at the time of said generating the intermediate frame.

25. An image decoding method according to Claim 24, wherein, when the error is detected in data of a key frame, the error avoidance processing is performed in a manner such that the intermediate frame is generated from data of another key frame which is substituted for data of the error-containing key frame.

26. An image decoding method according to Claim 24, wherein, when the error is detected in data of a key frame, the error avoidance processing is performed in a manner such that the intermediate frame is generated based on data of another key

frame and a correspondence data file relating thereto.

27. An image decoding method according to Claim 24, wherein, when the error is detected in a correspondence data file, the error avoidance processing is performed in a manner such that the intermediate frame is generated from another correspondence data file which is substituted for the error-containing correspondence data file.

28. An image decoding method according to Claim 24, wherein, when the error is detected in a correspondence data file, the error avoidance processing is performed in a manner such that the intermediate frame is generated based on a new correspondence data file generated based on another correspondence data file.

29. An image decoding method according to Claim 24, wherein, said error avoidance processing is abandoned in the event that it is judged that seriousness of the error is below a predetermined level.

30. An image coding method, comprising:

first generating, based on data of two adjacent key frames, correspondence data therebetween;

second generating, based on data of two key frames disposed at an interval, correspondence data therebetween; and

generating a data stream in a manner such that the correspondence data generated in said first generating serve as main data and the correspondence data generated in said second generating serve as spare data.

31. An image coding method according to Claim 30, wherein said second generating is performed with lower frequency than said first generating.

32. An image coding method according to Claim 30, wherein the correspondence data are generated in a manner such that data for checking for an error are embedded in the correspondence data.

33. A computer program executable by a computer, the program comprising the functions of:

acquiring a data stream that includes a plurality of key frames and a correspondence data file therebetween;

generating an intermediate frame between the key frames, from the data stream;

monitoring for an error in the data stream; and

performing, upon detecting an error, an error avoidance

processing at the time of said generating the intermediate frame.